



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,334	05/24/2006	Adrian Andrew Dorrington	5458UW-1	1867

22442 7590 07/26/2007  
SHERIDAN ROSS PC  
1560 BROADWAY  
SUITE 1200  
DENVER, CO 80202

EXAMINER
----------

BRAINARD, TIMOTHY A

ART UNIT	PAPER NUMBER
----------	--------------

3662

MAIL DATE	DELIVERY MODE
-----------	---------------

07/26/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/552,334	<b>Applicant(s)</b> DORRINGTON, ADRIAN ANDREW	
	<b>Examiner</b> Timothy A. Brainard	<b>Art Unit</b> 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>PTO-1449</u>                           |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-4, 14, 16-17, and 21 are rejected under 35 U.S.C. 102(e) as being described by Munro (US 7202941). Munro teaches (claim 1 and 21) a range sensing system comprising at least one energy source adapted to emit energy capable of reflection by one or more targets within a region, and at least one receiver adapted to sense the reflection of emitted energy from said at least one target within said region, and an activation system associated with said at least one energy source, said activation system being adapted to activate and deactivate an energy source in a cycle pattern with a selected source frequency, and a shielding system associated with said at least one receiver, said shielding system being adapted to block the sensing of reflected energy from a target by a receiver, said shielding system being activated and deactivated in a cyclic pattern with a selected receiver frequency, said source frequency and receiver frequencies being selected from different frequency values (fig 7 and para 144-148) wherein an output signal of said at least one receiver is compared with a reference signal to determine a range value for a selected target of the receiver, where

Art Unit: 3662

phase differences between the receiver signal and reference signal indicate a range value (para 51-56), (claim 3) the source frequency used is phase locked with respect to the receiver frequency used (para 51-56), (claim 4) a single signal generator generates a receiver frequency which is phase locked with respect to a source frequency generated by the same signal generator (para 51-56), (claim 14) the activation system controls the supply of power to an energy source (para 144-148), (claim 16) the shielding system is implemented through an enable signal applied to operate a receiver (fig 7 and para 147), and (claim 17) the reference signal is generated by mixing the receiver frequency and the source frequency (para 51-57).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munro as applied to claim 1 above, and further in view of Glaser et al (US 4552454). Glaser teaches indicating range values for a plurality of targets within a region (col 1, lines 14-20). It would have been obvious to modify Munro to include indicating range values for a plurality of targets within a region because it would give an operator the ability to measure the range of multiple targets at one time. With respect to claim 5, it is inherent that an output signal of a receiver has a frequency equal to the frequency difference between a source frequency and a receiver frequency.

Claims 5-6 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munro. It would have been obvious to modify Munro to include said at least one energy source is activated and said at least one receiver is shielded using a plurality of paired source and receiver frequencies and a receiver is adapted to emit a plurality of output signals in response to the use of said plurality of paired sets of source and received frequencies because it would allow an operator to modify the distance range the device was capable of determining.

Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munro as applied to claim 1 above, and further in view of Rafi (US 2003/0063775). Rafi teaches an energy source (claim 8) only with a diffuse emission pattern (para 187), (claim 9) formed from a light emitting diode (para 83), and (claim 10) emitting visible light energy (para 58). It would have been obvious to modify Munro to include an energy source with a diffuse emission pattern, formed from a light emitting diode, or emitting visible light energy because each is one of multiple design choices with no new or unexpected result.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Munro as applied to claim 1 above, and further in view of Kaneko et al (US 2001/0039740). Kaneko teaches a receiver being formed from a light sensitive transducer (para 66). It would have been obvious to modify Munro to include a receiver being formed from a light sensitive transducer because it is one of multiple design choices with no new or unexpected results.

Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munro as applied to claim 1 above, and further in view of Liu et al (US 2003/0223053). Lin teaches the receiver is formed from by a charged coupled device and the system includes only a single receiver (para 6 and 126). It would have been obvious to modify Munro to include the receiver is formed from by a charged coupled device and the system includes only a single receiver because each is one of multiple design choices with no new or unexpected results.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Munro as applied to claim 1 above, and further in view of Calderwood (US 2003/0146986). Calderwood teaches the shielding system is implemented through a physical barrier (para 14). It would have been obvious to modify Munro to include the shielding system is implemented through a physical barrier because it is one of multiple design choices with no new or unexpected result.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Munro as applied to claim 1 above, and further in view of Rafii (US 2003/0063775). Rafi teaches the reference signal is generated through a calibration procedure (claim 7). It would have been obvious to modify Munro to include the reference signal is generated through a calibration procedure because it is one of multiple way to implement a reference signal with no new or unexpected result.

Claim 19-20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Munro as applied to claim 1 above, and further in view of Steinlechner (US 6369880). Steinlechner teaches the range sensing system including a processing means adapted

to compare an output signal of the receiver to a reference signal and the processing means being a computer (col 5, lines 1-30). It would have been obvious to modify Munro to include the range sensing system including a processing means adapted to compare an output signal of the receiver to a reference signal and the processing means being a computer because it is one of multiple design choices with no new or unexpected results.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy A. Brainard whose telephone number is (571) 272-2132. The examiner can normally be reached on Monday - Friday 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (571)272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit: 3662

TAB

A handwritten signature in black ink, appearing to read "Thomas H. Tarcza". The signature is fluid and cursive, with the first name "Thomas" being more legible than the last name "Tarcza".

THOMAS H. TARCZA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600